

Further Studies on the Occurrence and Distribution of the Genera *Cionus* and *Cleopus* (Coleoptera: Curculionidae)

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Introduction

The observations reported here were made in 1974. The reader is also referred to an earlier report by Cunningham (1974), of detailed observations in South Hampshire in 1973.

One British species, *Cionus scrophulariae*, hitherto not noted, has now been found in the area previously studied. Further, the range of species of weevils that infest *Scrophularia aquatica* is found to be broader than was earlier reported. Some pointers as to how the range of weevils can co-exist on the same food-plants have been determined, almost fortuitously.

The species referred to in this report are — *Cionus scrophulariae* L., *C. hortulanus* Geof., *C. alauda* Hbst., *C. tuberculatus* Scop. and *Cleopus pulchellus* Hbst.

Geographical Area Covered

These observations have been made in selected areas up to some 15 miles north and north-east of Portsmouth, together with three other stations; at Ringwood, Hants.; at Newport, Isle of Wight; and at Weymouth, Dorset.

Methods

In order to improve chances of increasing one's knowledge of the range of species found, it was decided to make regular and frequent visits (where possible) to plant-sites throughout the year. As a result, the times of year when the imagos first appear after overwintering have also been determined with some accuracy, besides broadening observation as to distribution of the weevils on *Scrophularia* spp.

Observations

These observations fall into two sections: A, the earliest dates in 1974 when the various species were noted; and B, a table of occurrence of the species on *S. aquatica* sites. Circumstances allowed highly accurate observations for dates of appearances on *S. nodosa*, though less reliance must be placed on the first appearances reported for *S. aquatica* as sites could not be visited almost daily, as for the first-mentioned species. Whilst the appearance of the members of any one species is synchronous and almost dramatic (so it seems), leaving the host-plant appears to be a gradual process. As yet, overwintering sites for these weevils remain a mystery; neither Grandi (1929) nor Read, R. W. J. (personal communication from Dr. M. G. Morris of Monks Wood Experimental Station) nor this writer have located the whereabouts of hibernating specimens. (Observations made in 1974 on the weevils' distribution on

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S. nodosa confirm the writer's earlier report, but add nothing further in relation to species found.)

As will be seen, subjective indication of the abundance of the respective species has been given in Section B.

Discussion

The significant differences in times of emergence from overwintering suggests at least one means whereby these several species of weevil can co-exist on the same species of plants, in spite of apparent competition. Preliminary work by the writer indicates at least two further factors: differences in times of egg deposition, and also selection of highly specific egg-laying sites on the infested plants. It is hoped to report on these matters at a later date.

Occurrence of a range of *Cionus* and *Cleopus* species on both *Scrophularia nodosa* and *S. aquatica* is now established as under observations reported here and previously (Cunningham, 1974): viz. four species on *S. nodosa* and five on *S. aquatica*. What is further indicated is that *C. scrophulariae* is comparatively rare in S.E. Hampshire. This, in spite of assertions or implications in several popular books on insects and beetles that this species is relatively common (see Linszen, 1959; Daglish, 1960; Dibb, 1948). Relative frequencies of this range of weevil species in other parts of Great British would be of interest.

Acknowledgements

Mrs. J. F. Goodall is thanked for collecting from the Newport site. Dr. R. T. Thomson of the British Museum (Natural History) kindly confirmed identification of *Cionus scrophulariae*.

Table 1

A. Dates that adult weevils were first noted and active on plants.

	<i>S. nodosa</i>	<i>S. aquatica</i>
<i>Cionus scrophulariae</i>	No specimens found (41 sites examined)	31st May*
<i>C. hortulanus</i>	12th May	23rd May
<i>C. alauda</i>	12th May	25th May
<i>C. tuberculatus</i>	6th April	30th March
<i>Cleopus pulchellus</i>	30th March	Date not recorded (specimens supplied by acquaintance)

* First visit of year to site: specimens already active.

Table 2
B. Sites of *Scrophularia aquatica*

Site letter (as per writer's note-book)	No. of plants	Brief description of site and appropriate notes	Incident light (estimate) open exposed site=1.0	A=abundant; C=common; O=occasional; R=rare; —=absent				
				<i>Cionus scrophulariæ</i>	<i>Cionus hortulanus</i>	<i>Cionus dauda</i>	<i>Cionus tuberculatus</i>	<i>Cleopus pulchellus</i>
X	C.15	Roadside ditch—rural road (1973).	0.25	—	—	—	A	—
Y	est. 1000	Roadside ditch and its gently sloping banks—rural road.	0.7	—	A	O	C	—
Z	C.20	River bank of small river c.6 metres wide.	0.7	—	A	O	C	—
Z ₁	C.5	River bank about 25 metres W. of site Z.	0.3	—	O	O	C	—
Z ₂	2	Ditch about 35 metres S.W. of site Z.	0.25	—	—	C	—	—
AA	C.25	Bank of deep stream c.6 metres wide.	0.7	R	C	C	C	—
EE	C.10	Roadside verge, busy suburban road, 300 metres from large shopping centre.	0.3	—	O	O	C	—
GG	C.4	Flat heath, poorly colonised with vegetation, near to stream.	0.35	—	—	—	—	—
GG ₂	C.20	Steep bank of stream.	0.15	—	—	—	—	—
HH	2	West-facing bank at side of cart-track.	0.25	—	—	—	—	—
LL	est. 100	Bank of small river c.5 metres wide about 1 km. upstream from site Z.	0.7	—	C	C	C	—
PP	est. 50	E. and W. banks of small river, c.3 metres wide, 25 cm. deep.	0.35	R	C	C	O	—
QQ	est. 200	N. and S. banks of river about 1 km. upstream from site PP, c.2 metres wide 20 cm. deep.	0.35	—	C	A	C	—
SS	est. 6	Edge of brook. Plants roots partially sub-submerged.	0.4	—	O	—	—	O
TT	est. 100	Newport, I.o.W. In ditch, and on side of its banks.	0.4	C	—	C	C	—
		Weymouth, Dorset.	0.4	C	—	C	C	—

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[The abnormal rarity of *C. scrophulariae* in the author's district may well be correlated with the unusually high frequency of its nearest ally, *C. tuberculosus*, which to a very large extent appears to replace it there ecologically. Possibly where these two species occupy the same area they are in direct competition, the former usually prevailing, the latter only exceptionally; cf. however, the final entry under section B, and see further my Notes on British Cionini in *Ent. Rec.*, **86**: 265-269. — A. A. Allen.]

Notes and Observations

MELIANA FLAMMEA CURTIS IN THE ISLE OF WIGHT. — I would like to record the capture of two specimens of the Flame Wainscot in the Island. The first specimen, a worn male, came to m.v. light in my garden on 7th June, 1971. The second specimen, a fresh female, came to m.v. light here on 10th June, 1975. It seems likely the moth is breeding in the neighbourhood. — T. D. FEARNEHOUGH, 26 Green Lane, Shanklin, Isle of Wight.

EARLY ORANGE-TIPS IN 1974. — In his most interesting article "Notes on British Butterflies: Spring and Early Summer 1974" (*Ent. Rec.*, **87**: 20-21), Dr. C. J. Luckens mentions a very early male Orange-tip (*Anthocharis cardamines* L.) in Sussex on 20th April. It may be of interest to record that I saw four males of this species in the same county on 14th April. They were flying over a marshy hollow containing a generous growth of Lady's Smock (*Cardamine pratensis*) on the edge of Warren Wood, near Battle.

I had thought that this was exceptionally early but was subsequently reliably informed that one was recorded at the same locality on 6th April. — G. SUMMERS, 23 West Close, Stafford, Staffs., ST16 3TG.